

the status of the present application. As noted in the Examiner's "Interview Summary," pending claims 1 and 29 were discussed in the context of Applicants' previous Amendment and the prior art of record. During the interview, Applicants' attorneys argued that none of the prior art of record disclosed Applicants' invention of using a central host processor having stored telephone unit identification information and corresponding operating codes to help run a debit telephone system through communication with the mobile phone unit or its user. Applicants' attorneys also argued that the prior art failed to disclose Applicants' handset based billing algorithm. In view of the arguments of Applicants' attorneys, it was determined that pending claim 29 appears to be allowable over the prior art of record. With regard to claim 1, though, the Examiners proposed that an amendment be made to recite that the host processor stores mobile phone unit identification information which it can refer to in selecting operating codes to communicate to the mobile phone unit or its user.

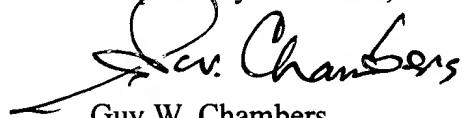
As proposed, Applicants have amended claim 1 to recite that the host processor stores mobile phone unit identification information which it can refer to in verifying whether a request to add amounts to the mobile telephone unit's debit account should be granted. The support for this amendment can be found in the specification at, among other places, page 12, lns. 3-8; page 14, lns. 4-13; page 18, ln. 17 – page 19, ln. 7 ("The ESN is checked by the HOST..."), page 23, lns. 22- 25 and page 37, lns. 1 - 21 ("During the DTMF dialogue between the central processing unit of the system provider and the user's phone, the encrypted license number of the user's phone is transferred and verified"). In view of this Amendment, Applicants submit that claim 1 is now in allowable form. Since claims 2-12, 14, 16 and 18-28 all depend from claim 1, they would also be allowable for the same reasons.

As discussed at the interview, claim 29 is allowable over the art of record. Like amended claim 1, it recites that the central host processor stores mobile telephone unit identification information. This mobile telephone unit identification information can be referred to for selecting operating codes needed for mobile telephone unit activation, which includes setting an initial debit account amount, and operating codes needed to later replenish that debit account. Since claims 30-49 are either dependent upon or narrower in scope than claim 29, they would also be allowable for the same reasons as claim 29.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 576-0200.

Respectfully submitted,



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APPENDIX

1. In a debit phone system with a system provider having a host processor that maintains accounts for use of mobile phone units including mobile telephone unit identification information, a mobile phone unit with internal accounting for use in a phone network wherein the mobile phone unit is a unitary hand-held device that internally calculates call charges and decrements call charges from a debit account, the mobile phone unit comprising:

communication means in the mobile phone unit for wireless communication in the phone network;

internal processing means in the mobile phone unit including a processor, a clock and memory for processing calls and call charges;

program means retained in the memory of the mobile phone unit including rate data and a complex billing algorithm with a multiple factor accounting protocol for classifying calls according to the basic categories of local calls, long distance calls, international calls and roaming calls, applying a call rate according to category, and calculating call charges as calls are made, the program means further including internal accounting means for generating an internal debit account in the phone unit, wherein the phone unit has means for communicating with the system provider and adding an authorized amount to the debit account;

wherein the mobile phone unit internally calculates call charges and decrements the calculated call charges from the amount in the debit account in the mobile phone unit as calls are made and wherein, to add amounts to the debit account, the mobile phone unit further includes phone unit identification information to be transmitted for verification by the system provider using the host processor, which host processor also verifies that a phone use account amount addable to the debit account of the identified phone unit has been prepaid; and

locking means for preventing calls from the phone unit when the amount in the debit account is exhausted.

2. The mobile phone unit of claim 1 wherein the program means further includes means for storing call charges as record data in the memory.

3. The mobile phone unit of claim 2 wherein the mobile phone unit has means for a communication session being initiated by the host processor at a time controlled by the system provider and communicating the record data of stored call charges from the mobile phone unit to the host processor of the system provider.

4. The mobile phone unit of claim 1 wherein the mobile phone unit has means for receiving an increase in the amount of the debit account in the mobile phone unit during a communication session with the host processor.

5. The mobile phone unit of claim 4 wherein the mobile phone unit has an RF transceiver and the communication session is established over the airways by RF signals.

6. The mobile phone system of claim 1 wherein the mobile phone unit has control means for deactivating the mobile phone unit when the debit account is exhausted.

7. The mobile phone system of claim 6 wherein the mobile phone unit has paging means for establishing a communication session with the host processor when the phone unit is deactivated.

8. The mobile phone unit of claim 1 wherein the mobile phone unit has means for establishing a communication session with a transaction station and upon verification of a set payment account amount by the transaction station increasing the amount of the debit account in the mobile phone unit.

9. The mobile phone unit of claim 1 wherein the mobile phone unit has security means for securely receiving an account amount to be added to the debit account in the mobile phone unit.

10. The mobile phone unit of claim 9 wherein the security means includes code means for receiving encrypted account communications and decrypting the account communications.

11. The mobile phone unit of claim 8 wherein a transaction station has means for communicating with a system user and with the mobile phone unit of the system user and verifying the authenticity of a transaction setting an account amount added to the debit account of the mobile phone unit.

12. The mobile phone unit of claim 11 wherein the mobile phone unit includes means for direct electronic coupling of the mobile phone unit with the transaction station.

14. The mobile phone unit of claim 1 wherein the mobile phone unit includes a visual display and the program means generates a visual display of the current amount of the debit account in the visual display.

16. The mobile phone unit of claim 1 wherein the rate data comprises a rate table under control of the system provider and secure from a mobile phone unit user.

18. The mobile phone unit of claim 1 wherein the multiple factor accounting protocol includes code means for factoring in the roaming charges based on the location of the mobile phone unit in a multi-zone communication network.

19. The mobile phone unit of claim 1 wherein the multiple factor accounting protocol includes code means for factoring in the roaming charges based on the location of the mobile phone unit in a multi-zone communication network when called.

20. The mobile phone unit of claim 1 wherein the multiple factor accounting protocol includes code means for factoring in long distance charges based on a location of a party being called.

21. The mobile phone unit of claim 1 wherein the multiple factor accounting protocol includes code means for factoring in call surcharges and deductions based on a data content of a call.

22. The mobile phone unit of claim 1 wherein the multiple factor accounting protocol includes code means for classifying calls for calculating call charges based on a telephone number called from the mobile phone unit.

23. the mobile phone unit of claim 1 wherein the clock of the mobile phone unit is a real time clock and the multiple factor accounting protocol includes code means for calculating call charges based on the time of day of calls on the mobile phone unit.

24. The mobile phone unit of claim 23 wherein the real time clock provides time and date, and the phone unit has circuit means for deactivating the phone unit at a predetermined time and date.

25. The mobile phone unit of claim 12 in combination with a transaction station.
26. The mobile phone unit of claim 25, wherein the transaction station is a stand alone unit electronically coupled to the phone unit.
27. The mobile unit of claim 1 in combination with the host processor wherein the host processor has means for remote activation of the mobile phone unit.
28. The mobile phone unit of claim 27 wherein the host processor has means for remote programming of the mobile phone unit.
29. A debit telephone system comprising:
a plurality of cordless hand-held mobile telephone units, wherein each of said hand-held mobile telephone units includes a processor, memory and internal accounting software,
said internal accounting software including a debit account with a representation of prepaid funds, a plurality of charge rates and a billing algorithm which classifies each telephone call into one of a plurality of billing categories, selects a charge rate corresponding to that billing category, calculates an appropriate charge for that telephone call in real time by using said selected charge rate and subtracts this appropriate charge from said debit account;
a system provider having a host processor for coordination of mobile phone accounts, wherein said host processor stores mobile telephone unit information including mobile telephone unit identification information, operating codes needed for mobile telephone unit activation and operating codes needed for replenishing mobile telephone unit debit accounts whereby, upon receipt of mobile telephone unit identification information from a particular mobile telephone unit or its user, said host processor ascertains the operating codes needed to activate that particular mobile telephone unit or to replenish its debit account, whereupon said operating codes are communicated to the particular mobile phone unit or its user.
30. The debit telephone system of claim 29 wherein said billing categories include billing categories for local calls and long distance call.

31. The debit telephone system of claim 29 wherein said billing categories include billing categories for roaming calls.

32. The debit telephone system of claim 29 wherein said billing categories include billing categories for local calls, long distance calls, roaming calls and international calls.

33. The debit telephone system of claim 29 wherein said billing categories include billing categories for calls placed within the United States and calls made internationally.

34. The debit telephone system of claim 29 wherein the charge rates corresponding of each billing category are different.

35. the debit telephone system of claim 29 wherein the charge rates corresponding to different billing categories may be the same.

36. The debit telephone system of claim 29 wherein the host processor stored operating codes are communicated to the user by a system provider operator who has access to said host processor.

37. The debit telephone system of claim 36 wherein the user enters the operating codes into the mobile telephone unit by manually punching keys on the mobile telephone unit.

38. The debit telephone system of claim 29 wherein the host processor stored operating codes are communicated over the airwaves directly from the host processor to the mobile telephone unit.

39. The debit telephone system of claim 29 wherein calls are prevented from being made when the debit account has a zero balance.

40. The debit telephone system of claim 29 further including a visual display of the debit account balance.

41. The debit telephone system of claim 29 wherein said mobile telephone unit further includes a real time clock chip.

42. A debit telephone system comprising:

a plurality of cordless hand-held mobile telephone units, wherein each of said hand-held mobile telephone units includes a processor, memory and internal accounting software,

said internal accounting software including a debit account with a representation of prepaid funds, a plurality of charge rates and a billing algorithm which can classify each telephone call into one of a plurality of billing categories including categories for local calls, long distance calls and roaming calls, select a charge rate corresponding to that billing category, calculate an appropriate charge for that telephone call in real time by using said selected charge rate and subtract this appropriate charge from said debit account;

a system provider having a host processor for coordination of mobile phone accounts, wherein said host processor stores mobile telephone unit information including mobile telephone unit identification information, operating codes needed for mobile telephone unit activation and operating codes needed for replenishing mobile telephone unit debit accounts whereby, upon receipt of mobile telephone unit identification information from a particular mobile telephone unit or its user, said host processor ascertains the operating codes needed to activate that particular mobile telephone unit or to replenish its debit account, whereupon said operating codes are communicated to the particular mobile phone unit or its user.

43. The debit telephone system of claim 42 wherein the host processor generated operating codes are communicated to the user by a system provider operator who has access to said host processor.

44. The debit telephone system of claim 43 wherein the user enters the operating codes into the mobile phone unit by manually punching keys on the mobile phone unit.

45. The debit telephone system of claim 42 wherein the host processor stored operating codes are communicated over the airwaves directly from the host processor to the mobile telephone unit.

46. The debit telephone system of claim 42 wherein calls will be prevented from being made when the debit account has a zero balance.

47. The debit telephone system of claim 42 further including a visual display of the debit account balance.

48. A debit telephone system comprising:

a plurality of cordless hand-held mobile telephone units, wherein each of said hand-held mobile telephone units includes a processor, memory and internal accounting software,

said internal accounting software including a debit account with a representation of prepaid funds, a plurality of charge rates and a billing algorithm which can classify each telephone call into one of a plurality of billing categories, select a charge rate corresponding to that billing category, calculate an appropriate charge for that telephone call in real time by using said selected charge rate and subtract this appropriate charge from said debit account;

a system provider having a host processor for coordination of mobile phone accounts, said host processor stores mobile telephone unit information including mobile telephone unit identification information, assignable telephone numbers, operating codes needed for mobile telephone unit activation and operating codes needed for replenishing mobile telephone unit debit accounts whereby, upon receipt of mobile telephone unit identification information from a particular mobile telephone unit or its user and, at the time of activation, information identifying the user's locale, said host processor ascertains the operating codes needed to activate that particular mobile telephone unit or to replenish its debit account and, at the time of activation, ascertains an assignable telephone number which corresponds to the mobile telephone user's locale, whereupon said operating codes and assignable telephone number are communicated to the particular mobile phone unit or its user.

49. A debit telephone system comprising:

a plurality of cordless hand-held mobile telephone units, wherein each of said hand-held mobile telephone units includes a processor, memory and internal accounting software,

said internal accounting software including a debit account with a representation of prepaid funds, a plurality of charge rates and a billing algorithm which can classify each telephone call into one of a plurality of billing categories including categories for local, long

distance and roaming telephone calls, select a charge rate corresponding to that billing category, calculate an appropriate charge for that telephone call in real time by using said selected charge rate and subtract this appropriate charge from said debit account;

a system provider having a host processor for coordination of mobile phone accounts, said host processor stores mobile telephone unit information including mobile telephone unit identification information, assignable telephone numbers, operating codes needed for mobile telephone unit activation and operating codes needed for replenishing mobile telephone unit debit accounts whereby, upon receipt of mobile telephone unit identification information from a particular mobile telephone unit or its user and, at the time of activation, information identifying the user's locale, said host processor ascertains the operating codes needed to activate that particular mobile telephone unit or to replenish its debit account and, at the time of activation, ascertains an assignable telephone number which corresponds to the mobile telephone user's locale, whereupon said operating codes and assignable telephone number are then communicated to the particular mobile phone unit or its user.

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